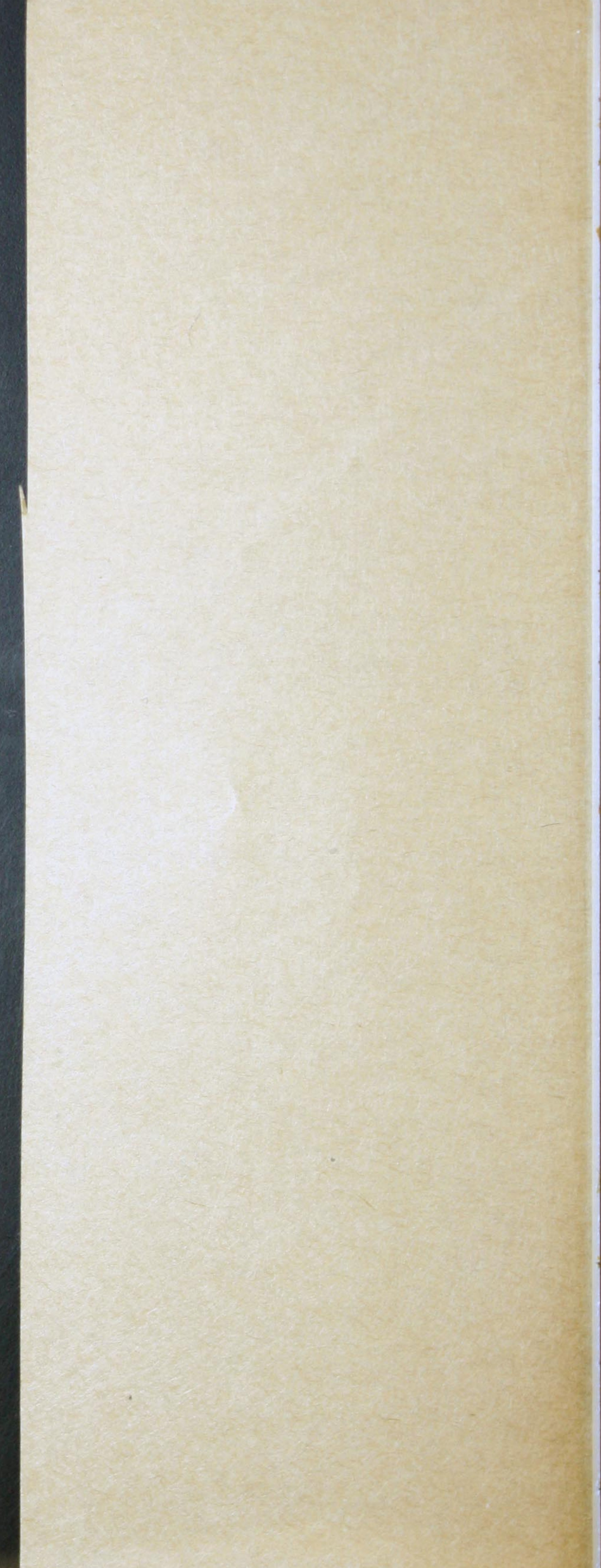


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How to finish California Redwood

VARNISH

How to Finish California Redwood



California Redwood
Association
Call Building
San Francisco

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by
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Redwood is a Perfect Surface to Paint, Enamel or Stain

Nature made Redwood a perfect surface to stain, paint, or enamel.

It is free from pitch or resin, and there is no trouble with raised grain.

Redwood is porous and absorbs paint readily. Paint does not have to be forced into Redwood by use of excessive quantities of turpentine. Redwood has a cellular structure of large capacity which in thoroughly dry Redwood furnishes a penetration, giving paint or enamel a firm hold on the wood as well as taking a sufficient quantity to give a thorough covering and an even distribution.

Painting is a simple process. It consists of three agencies—

- (1) A vehicle to secure penetration (usually turpentine).
- (2) An oil to hold the color, and form a protective film on the surface.
- (3) The pigment or color itself.

Good paint will last until the oil film wears out and permits the finely ground particles of pigment to fall away as dust. The heavier the coat of oil and the deeper the penetration the better the job—Redwood's porosity or absorbing power is therefore a perfect surface to paint, enamel, or stain.

To insure best results Redwood should be thoroughly dry when painted, enameled, or stained. Unless absolutely necessary it should not be painted on a rainy day—the wood absorbs moisture from the air, which partially fills the pores that should be filled with paint.

If specific instructions given in this booklet for painting, enameling, or staining of Redwood are carefully followed, a novice can paint Redwood in a thoroughly satisfactory and serviceable manner.

How to Stain Redwood

Redwood possesses a beauty in grain and texture that makes it highly prized for interior trim. Redwood should not be covered with paint any more than mahogany or oak.

Redwood has a rich, warm, soft, reddish-brown color, and sanded and waxed in the natural it produces a charming and "homey" effect.

In order to preserve the individuality of Redwood in its beauty of figure and texture the California Redwood Association has developed a line of stains by which Redwood can be shaded to any color desired. These are permanent effects, economical in cost and exceedingly simple in proper application.

This stain is not sold, but the formulae are given so that any interior decorator or painter can successfully apply them if the instructions given are carefully and intelligently followed.

We give in this booklet formulae for 18 shades, and if any special color or shade is desired the Association's expert will work out a formula if a sample of the color is submitted.

Sample No. 1 Iron Gray

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve $1\frac{1}{3}$ ounces Reduced Iron (iron by hydrogen) in 21 ounces of glacial acetic acid for 4 days.

Then add to above 107 ounces water.

Filter, and stain is ready.

SECOND COAT—(Makes 1 gal. and 3 pts., covers 250 sq. ft.)

Raw Linseed Oil	1	quart	} mix first
White lead in oil	2	pounds	
Dry Silex	$1\frac{1}{2}$	pounds	
Drop Black in oil	1	ounce	} add in order
Turpentine	1	pint	
Benzine	1	quart	
Litharge	$\frac{1}{4}$	pound	

Strain through cheese cloth and apply.

Sample No. 2 Russian Gray

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve $\frac{1}{4}$ pound Stannous Chloride in $\frac{1}{2}$ gallon of hot water—for Solution "A."

Dissolve $\frac{1}{4}$ pound Reduced Iron in $\frac{1}{2}$ gallon Glacial Acetic acid for 4 days—for solution "B."

To 16 ounces of Solution "A" add 16 ounces of solution "B."

Filter, and stain is ready.

R E S I S T S F I R E

R E D W O O D

SECOND COAT—(Makes 1½ gals., covers 250 sq. ft.)

Raw Linseed Oil	1	quart	} mix first
White Lead in oil	8	pounds	
Dry Silex	2½	pounds	
Vandyke Brown in oil	1	ounce	
Chrome Yellow (light) in oil	⅓	ounce	
American Vermilion in oil	⅓	ounce	} add in order
Aluminum Powder	4	ounces	
Turpentine	1	quart	
Benzine	2	quarts	
Litharge	¼	pound	

Strain through cheese cloth and apply.

Sample No. 3 Pearl Gray

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 1 ounce of Reduced Iron (iron by hydrogen) in ½ pint of Glacial Acetic Acid for four days. Take 6 ounces of above solution, add 120 ounces water.

Filter, and stain is ready.

SECOND COAT—(Makes 1½ gals., covers 250 sq. ft.)

Raw Linseed Oil	1	quart	} mix first
Zinc in oil	1	pound	
White Lead in oil	8	pounds	
Dry Silex	3	pounds	
Chrome Green (light) in oil	⅓	ounce	
Chrome Yellow (light) in oil	⅓	ounce	} add in order
Turpentine	1	quart	
Benzine	2	quarts	
Litharge	¼	pound	

Sample No. 4 Mauve Gray

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 4 ounces Gallic Acid, 4 ounces Nutgall, 4 ounces Permanganate in 1 gal. water.

SECOND COAT—(Makes 1½ gals., covers 250 sq. ft.)

Raw Linseed Oil	1	quart	} mix first
White Lead	8½	pounds	
Dry Silex	1½	pounds	
Vermilion (American in oil)	⅓	ounce	
Turpentine	1	quart	} add in order
Benzine	1½	quarts	
Litharge	¼	pound	

Sample No. 5 Peacock Blue

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 4 ounces Gallic Acid, 4 ounces Nutgall, 4 ounces Permanganate in 1 gal. water.

SECOND COAT—(Makes 1½ gals., covers 250 sq. ft.)

Raw Linseed Oil	1	quart	} mix first
Dry Silex	3	pounds	
White Lead	4½	pounds	
Ultramarine Blue in oil	10	ounces	
Raw Umber in oil	¼	pound	
Chrome Green (deep)	1	pound	} add in order
Aluminum Powder	¼	pound	
Turpentine	1½	quarts	
Benzine	1½	quarts	
Litharge	¼	pound	

Sample No. 6 Medium Brown

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 4 ounces Gallic Acid, 4 ounces Nutgall, 4 ounces Permanganate in 1 gal. water.

D E F I E S R O T

C A L I F O R N I A

SECOND COAT—(Makes 1¼ gals., covers 200 sq. ft.)

Raw Linseed Oil	1	quart	} mix first
Dry Silex	4	pounds	
American Vermilion in oil	6	ounces	
Burnt Sienna in oil	1	pound	
Aluminum Powder	¼	pound	} add in order
Rose Lake in oil	½	pound	
Turpentine	1½	quarts	
Benzine	1	quart	
Litharge	¼	pound	

Sample No. 7 Dark Seal Brown

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 6 ounces Reduced Iron (iron by hydrogen) in 4 ounces Glacial Acetic Acid 4 days.

Take 3 ounces of above solution, add 120 ounces water. Filter, and stain is ready.

SECOND COAT—(Makes 1¼ gals., covers 250 sq. ft.)

Raw Linseed Oil	1	quart	} mix first
Dry Silex	4	pounds	
American Vermilion in oil	6	ounces	
Burnt Sienna in oil	1	pound	
Rose Lake in oil	½	pound	} add in order
Aluminum Powder	¼	pound	
Turpentine	1½	quarts	
Benzine	1	quart	
Litharge	¼	pound	

Sample No. 8 Old Rose

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 2 ounces of Nutgall (powdered) in ¼ gal. hot water—Solution "A."

Dissolve 2 ozs. Tannic Acid (powdered) in ¼ gal. hot water—Solution "B."

Dissolve 4 ounces Logwood Extract in ¼ gal. hot water—Solution "C."

Dissolve 1 oz. Gallic Acid in ¼ gal. hot water—Solution "D."

Mix well 4 ozs. Solution "A," 4 ozs. Solution "B," 8 ozs. Solution "C," 2 ozs. Solution "D."

Add 1 oz. of Powdered Alum. Filter, and stain is ready.

SECOND COAT—(Makes 1 gal., covers 200 sq. ft.)

Raw Linseed Oil	1	quart	} mix first
Dry Silex	1½	pounds	
Indian Red in oil	¼	pound	
White lead in oil	2	pounds	
Vermilion (American)	⅓	ounce	} add in order
Aluminum Powder	1½	ounces	
Turpentine	1	quart	
Benzine	1	quart	
Litharge	¼	pound	

Sample No. 9 Pea Green

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 4 ozs. Gallic Acid, 4 ozs. Nutgall, 4 ozs. Permanganate in 1 gal. water.

SECOND COAT—(Makes 1½ gals., covers 250 sq. ft.)

Raw Linseed Oil	1	quart	} mix first
Dry Silex	3	pounds	
Chrome Green (light) in oil	14	ounces	
Aluminum Powder	6	ounces	
Chrome Yellow (light)	4	ounces	} add in order
White Lead	2	pounds	
Turpentine	1	quart	
Benzine	2	quarts	
Litharge	¼	pound	

R E S I S T S F I R E

R E D W O O D

Sample No. 10 *Light Gray* (Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)
Dissolve 4 ozs. Gallic Acid, 4 ozs. Nutgall, 4 ozs. Permanganate in 1 gal. water.

SECOND COAT—(Makes 1 gal., covers 200 sq. ft.)

Raw Linseed Oil	1	quart	} mix first
Zinc in oil	1	pound	
White Lead in oil	8	pounds	
Dry Silex	3	pounds	} add in order
Turpentine	1	quart	
Benzine	1½	quarts	
Litharge	¼	pound	

Sample No. 11 *Natural* (Interior Finish)

Sandpaper the wood. Give 3 coats Wax, well rubbed in.

Sample No. 12 *Antique Gray* (Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)
Dissolve ¼ lb. Stannous Chloride in ½ gal. of water for Solution "A."

Dissolve ¼ lb. Reduced Iron (iron by hydrogen) in ½ gal. Glacial Acetic Acid 4 days, for Solution "B."

To 16 ozs. of Solution "A" add 16 ounces Solution "B." Filter, and stain is ready.

SECOND COAT—(Makes 1 gal., covers 250 sq. ft.)

Raw Linseed Oil	1	quart	} Mix well first
Dry Silex	1	pound	
Green Seal Zinc in oil	9½	pounds	
White Lead, in oil (Carters)	3	pounds	
Chrome Green in oil	⅛	ounce	} then add
Turpentine	1	quart	
Benzine	1	quart	
Litharge or Sugar of Lead	¼	pound	

Strain with cheese cloth.

Sample No. 13 *Medium Dove Gray* (Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)
Dissolve ¼ lb. Stannous Chloride in ½ gal. of water for Solution "A."

Dissolve ¼ lb. Iron (iron by hydrogen) in ½ gal. of Glacial Acetic Acid 4 days. Solution "B."

To 16 ozs. of Solution "A" add 16 ozs. Solution "B." Filter, and the stain is ready.

SECOND COAT:

Raw Linseed Oil	1	quart	} Mix well
Dry Silex	1	pound	
Green Seal Zinc	9½	pounds	
White Lead (in oil), Carters	3	pounds	
Naples Yellow in oil	1	ounce	} then add
Vermilion Orange in oil	1	ounce	
Turpentine	1	quart	
Benzine	1	quart	
Litharge or Sugar of Lead	¼	pound	

Strain with cheese cloth.

Sample No. 14 *Light Silver Gray* (Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)
Dissolve ¼ lb. Stannous Chloride in ½ gal. water for Solution "A."

Dissolve ¼ lb. Reduced Iron (iron by hydrogen) in ½ gal. of Glacial Acetic Acid 4 days for Solution "B."

D E F I E S R O T

C A L I F O R N I A

To 16 ozs. of Solution "A" add 16 ozs. Solution "B."

Filter, and stain is ready.

SECOND COAT—(Makes 1 gal., covers 250 sq. ft.)

Raw Linseed Oil	1	quart	} Mix well
Dry Sillex	1	pound	
Green Seal Zinc in oil	14	pounds	
Turpentine	1	quart	} then add
Benzine	1	quart	
Litharge or Sugar of Lead	1/4	pound	

Strain with cheese cloth.

Sample No. 15 Jonquil Gray

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 6 ozs. Reduced Iron (iron by hydrogen) in 4 ozs. of Glacial Acetic Acid 4 days. To 3 ozs. of this solution add 120 ozs. water.

Filter, and stain is ready.

SECOND COAT—(Makes 1 gal., covers 200 sq. ft.)

Raw Linseed Oil	1	quart	} Mix well
Dry Sillex	1	pound	
Green Seal Zinc in oil	14	pounds	
Turpentine	1	quart	} then add
Benzine	1	quart	
Litharge or Sugar of Lead	1/4	pound	

Strain with cheese cloth.

Sample No. 16 Antique Yellow

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 6 ozs. Reduced Iron (iron by hydrogen) in 4 ozs. of Glacial Acetic Acid 4 days. To 3 ozs. of this solution add 120 ozs. water.

Filter, and stain is ready.

SECOND COAT—(Makes 1 gal., covers 250 sq. ft.)

Raw Linseed Oil	1	quart	} Mix well
Dry Sillex	1	pound	
Green Seal Zinc in oil	10	pounds	
White Lead (Carters)	4	pounds	
Italian Pink in oil	1	ounce	
Naples Yellow in oil	1/2	ounce	
Mummy, or Vandyke Brown			} then add
in oil	1/2	ounce	
Turpentine	1	quart	
Benzine	1	quart	
Litharge or Sugar of Lead	1/4	pound	

Strain with cheese cloth.

Sample No. 17 Steel Gray

(Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)

Dissolve 1 1/2 ozs. Reduced Iron (iron by hydrogen) in 21 ozs. Glacial Acetic Acid 4 days, then add 107 ozs. water.

Filter, and stain is ready.

SECOND COAT—(Makes 1 gal., covers 250 sq. ft.)

Raw Linseed Oil	1	quart	} Mix well
White Lead (Carters)	8 1/2	pounds	
Dry Sillex	1 1/2	pounds	
American Vermillion in oil	1/8	ounce	
Ultramarine blue in oil	1/8	ounce	
Turpentine	1	quart	} then add
Benzine	1	quart	
Litharge or Sugar of Lead	1/4	pound	

Strain with cheese cloth.

R E S I S T S F I R E

Sample No. 18 Cold Steel Gray (Interior Finish)

FIRST COAT—(Makes 1 gal., covers 200 sq. ft.)
Dissolve $1\frac{1}{3}$ ozs. Reduced Iron (iron by hydrogen) in 21 ozs. Glacial Acetic Acid 4 days, then add 107 ozs. water.

Filter, and stain is ready.

SECOND COAT—(Makes 1 gal., covers 250 sq. ft.)

Raw Linseed Oil	1	quart	}	mix well
Green Seal Zinc in oil	1	pound		
White Lead (Carters)	8	pounds		
Dry Silex	3	pounds		
Chrome Green (light) in oil	$\frac{1}{6}$	ounce		
Chrome Yellow (light) in oil	$\frac{1}{6}$	ounce	}	then add
Turpentine	1	quart		
Benzine	2	quarts		
Litharge or Sugar of Lead	$\frac{1}{4}$	pound		

Strain with cheese cloth.

Directions for Using Acid Stains

1. The wood should be thoroughly sand-papered to remove all soil or grease marks. Also dust well before the first stain is applied. Grease marks that do not respond to sand-paper can be removed with benzine. Don't sandpaper across the grain—rub with the grain.
2. The first coat should be applied evenly and carefully with a full brush, allowing the wood to satisfy its appetite by absorption. Should there be a hard streak in the wood it will show lighter than the rest of the piece. Treat this with sand-paper, dipping sand-paper in the first coat solution and sand-paper the place and apply more stain with brush. Repeat until a uniform coverage is secured.
3. The first coat should dry two days if the weather is warm and sunny. If rainy or moist, do not apply the second coat until the entire surface is uniformly clear and dry; that is, not spotted with damp places.
4. Before applying the second coat sand-paper lightly with No. 0 sand-paper. Remove the dust and apply the second coat with a brush. In applying the second coat work your surface to be covered in sections of about 10 square feet. When the second coat is put on it will remain for a little while with a bright wet appearance, while the wood is absorbing the stain. As soon as this wet appearance has faded into a flat dull effect, or loses its shine, the second coat should be rubbed with cheese cloth *first across the grain*, which fills the wood, and

then with the grain, which clears it and gives even distribution. After the section has been gone over in this way wipe the surface perfectly clean.

5. Be sure and "pick" all grooves, beads, corners, etc., of surplus material, changing the cheese cloth at the end of the "pick" with each rub to give a thorough cleaning. The "picking" must be done well or the corners, grooves, etc., will look dirty and give the work an untidy appearance.
6. If puttying is done before the second coat is applied, shorten the putty with benzine and a little dry coloring, this will prevent the oil in the putty from spreading and leaving the wood discolored around the nail holes. Stain a piece of wood, make nail holes and putty them as above stated; if the result is not right try a piece by puttying after it is filled—it is simpler to match the putty after the work is filled. Either method will give good results.
7. Under no circumstances use shellac on the wood before you apply this stain.
8. Two coats, as above described, finish the work in a flat tone. If a polish is desired it can be waxed. Allow the second coat a week or 10 days to dry before wax is applied.
9. Do not put any of these stain mixtures in tin—if you do the acids will attack the metal and spoil the stain. Use glass or crocks.
10. Never mix the different stains together. For instance Gallic acid should be kept from ammonia water vapor. With ferric salts it gives a bluish black precipitate. Triturated with potassium permanganate or chlorate it may take fire or explode.
11. **The wood must be thoroughly dry** if satisfactory results are to be secured. This is important, and those contemplating the use of the stain should assure themselves that the wood is thoroughly seasoned.
12. Before applying the stain to the work test it on a sample piece of Redwood.

Second Coat

This coat is composed of materials of a protective nature, namely:

Pure raw linseed oil (not boiled oil).

R E S I S T S F I R E

Pure spirits of turpentine (not turps, or near turpentine).

Pure benzine (not distillate or coal oil).

Dry silex, finely ground (not dry ochre).

Colors ground in oil to obtain the color desired.

White lead ground in oil (not dry lead).

Zinc, ground in oil (not dry zinc).

Aluminum dry powder.

Drier—Either $\frac{1}{4}$ pound of litharge to the gallon, or $\frac{1}{2}$ pint Japan drier.

How to Mix Second Coat Properly

- | | |
|---|-------------------------------------|
| 1. Add the oil. | } Mix these ingredients thoroughly. |
| 2. White lead or zinc. | |
| 3. Dry silex. | |
| 4. Then add the aluminum (if specified). | |
| 5. Add the turpentine. | |
| 6. Add the colors ground in oil (as specified). | |
| 7. Add the benzine. | |
| 8. Add the drier. | |

Mix well and strain through a fine weave cheese cloth.

Oil Stains

Oil stains are used very successfully on Redwood, but do not give the range of artistic color possibilities that are procurable through the medium of acid stain. The oil stain has a tendency to darken the wood, and this applies particularly to the ends of a piece, such as a mantel-top where the ends show.

Formula:

Boiled Linseed Oil5 Gals.

Turpentine1 Gal.

Color ground in oil to suit the shade or tone required.

Silex (finely ground)3 Lbs.

Litharge or sugar of lead for a dryer.

(Covers 250 square feet.)

The wood should be carefully sand-papery and wiped free of dust before the stain is applied. It should be applied freely and rubbed well into the pores to give a clear and even coverage.

Wipe with clean cheesecloth. When the first coat is dry it should be sand-papery lightly and then finished with a coat of wax, shellac, or varnish.

Creosote Stains for Exterior Use

From an artistic point of view only this way to treat exterior surfaces is the superiority of creosoted stains over paint is readily apparent. Paint, though it hides the surface, is a liquid opaque veneer which completely covers the wood and hides its natural surface. Stain, whether it be oil or water base, is the art of coloring by color transparent pigments but does not grain and texture, however, as can be seen.

As an example, if a house is built of redwood, this is the result of staining. The redwood is stained with a stain which is a mixture of creosote and iron oxide. The stain is applied to the wood and the iron oxide is oxidized by the creosote. The result is a rich, warm, reddish-brown color which is the natural color of the wood. The stain is also waterproof and will last for many years.

The stain is applied to the wood with a brush or a spray. The stain is applied to the wood and the iron oxide is oxidized by the creosote. The result is a rich, warm, reddish-brown color which is the natural color of the wood. The stain is also waterproof and will last for many years.

A stain like this is a great improvement over paint. It is a natural color which is the natural color of the wood. The stain is also waterproof and will last for many years. It is a great improvement over paint.

Creosote stains are a great improvement over paint. They are a natural color which is the natural color of the wood. The stain is also waterproof and will last for many years. It is a great improvement over paint.

Formula:

Creosote	5 Gal.
Iron Oxide	2 lb.
Water	10 Gal.

For a list of dealers, see the back of this book. For a list of dealers, see the back of this book.

Enameling Redwood

Priming is the foundation upon which the whole superstructure of enamel will either make good or fail, therefore one should thoroughly understand its principles and take the utmost care to make the application in a good workmanlike manner.

A little color should be added to each coat, according to the depth of finished tone, as this insures a more satisfactory job.

The priming, or foundation coat, is the only one in which linseed oil should be used. The priming coat should have ample time to dry; it may feel dry and seem hard under the touch of the finger, but this is not always an indication it is thoroughly dry. No less than a week should be allowed for drying, and two weeks would be better. Linseed oil absorbs oxygen from the atmosphere for about 10 days, and during that period it is undergoing changes in both form and bulk; it increases about 10 per cent, and it is not to be considered dry until this change takes place. Another coat on top of the priming coat before it is thoroughly dry shuts out access to the air and arrests the drying process.

The priming coat should be well sandpapered. This done, the work should be followed by applications which are best known as flat or lead coats, and allow 4 days for drying.

Formula for priming coat for the interior:

White Lead100 Lbs.
Boiled Linseed Oil 7 Gals.
Turpentine1½ Gals.
Litharge or sugar of lead	...1¼ Lbs.

(Covers 250 square feet.)

Use white lead putty. Make this by mixing or kneading 50 per cent of raw linseed oil and putty with 50 per cent of white lead (12-year lead). This makes a putty that will sandpaper nicely, won't shrink or harden, and dries filling the hole completely.

Formula for second coat. (Flat or lead coat) :

White Lead	100 Lbs.
Turpentine	3 Gals.
Binding Varnish (good quality)	1 pint
Sugar of Lead.....	2 ozs.
(Covers 200 square feet.)	

The second coat should also be well sandpapered; that being done, the third or preparatory coat for enameling should be applied.

Formula for third coat or preparatory coat for enameling:

White Lead	100 Lbs.
Turpentine	2½ Gals.
Binding Varnish	1 Qt.
Sugar of Lead.....	¼ Lb.
(Covers 200 square feet.)	

The third coat should be well sandpapered. Then apply the enamel.

Remember a good enamel will go further, work easier under the brush and last longer and with more gloss than a cheap enamel.

For an eggshell gloss, use eggshell enamel.

For an ordinary lead and oil job follow formula for exterior painting, only allow more time for drying.

Paint

Because of its soft, absorbing nature and the absence of pitch and resin, Redwood is an ideal surface over which to paint.

Paint should never be applied to Redwood unless the wood is absolutely dry. Redwood should not be painted, either on or immediately after a rainy day, as the wood absorbs moisture from the damp air.

Shellac should not be used on knots or sap in painting exterior Redwood. For interior painting knots and sap can be shellacked lightly, but not until the priming coat is applied. If shellac is applied directly to Redwood it is likely to scale. If shellac is used thoroughly sandpaper the shellac before applying the paint.

No permanent job of painting on any kind of wood should have less than three coats.

Priming or First Coat

The priming or first coat should be mixed thin and with sufficient oil to satisfy the absorbing power of the wood, and only enough pigment to provide a foundation.

Formula:

White Lead100 Lbs.
 Raw Linseed Oil..... 7 Gals.
 Turpentine $\frac{1}{2}$ Gal.
 Litharge Drier $\frac{1}{2}$ to $\frac{3}{4}$ Lb.
 (Covers 300 square feet.)

(Note: Use Litharge only in damp weather. Drier should not be used in hot weather.)

(Note: White lead varies in brands—the older the lead the more oil it will absorb. Formulae given in this book are based on 12-year lead.)

Litharge should be well mixed with turpentine before adding it to the paint.

If Japan drier is desired use one gill of good Japan drier instead of the litharge stated above. When Japan drier is used the paint should be stirred frequently to keep it in proper solution.

The priming coat must have from 5 to 7 days to dry, and not less than 12 days in case the surface is exposed to rains or dampness.

Never use yellow ochre for priming—it dries too hard, has no elasticity and the second coat cannot adhere properly. Fifty per cent imported French silica ochre, ground in oil, can be used with safety—the other 50 per cent being white lead. Under no condition use white ochre on surfaced or planed material. Imported French silica ochre is permanent in color and *extremely durable* in wearing qualities. It is also very useful and valuable in mixing or tinting pigment. On rough barns, fences, etc., it has no equal; both yellow and white ochre can be used on rough surfaces.

Second Coat

After all nail holes, etc., are well puttied with pure linseed oil putty (not glazier's putty) the work is

ready for the second coat. This coat should be colored the shade the work is to be when completed.

Formula:

White Lead	100 Lbs.
Raw Linseed Oil.....	5 Gals.
Turpentine	1 Gal.
Color ground in oil.	
(Covers 250 square feet.)	

The same amount of drier and time to dry should be given this coat as the priming coat.

This second coat should be well brushed out—the brushing excludes the air and allows the paint to dry hard and uniform. Much trouble with paint can be traced to improper application of the second coat.

Third Coat

The third coat, in addition to being the finishing coat, must withstand the elements—heat, cold, humidity, rain or snow, salt air on the sea coast, etc., and it should be mixed accordingly. Consideration should also be given in mixing the third coat as to whether the exposure is north, east, south, or west. The wearing power of paint is always poorest on the southern exposure, where it is subjected longest to the rays of the sun. In some sections paint will last only one-quarter as long on a southern exposure as it will on the north side.

The following formula should be used where there is a hot climate and on southern or sun exposures:

White Lead	100 Lbs.
Raw Linsed Oil.....	3½ to 4 Gals.
Turpentine	½ Gal.
(Covers 250 square feet.)	

For northern exposure add an additional ½ gallon of turpentine.

The following formula should be used along the sea coast or where salt air is encountered:

White Lead	75 Lbs.
Pure French Green Seal Zinc,	
ground in oil.....	25 lbs.
Raw Linseed Oil.....	3½ to 4 Gals.
Turpentine	½ Gal.
(Covers 250 square feet.)	

